

## V11 Series Three-Way Solenoid Air Valve

### Application

V11 three-way valves are for use in applications where the operation of a pneumatically operated device is dependent

upon an electrical circuit. The valves direct supply air to the pneumatic device when the coil is energized or de-energized, depending on the supply and exhaust air connections.

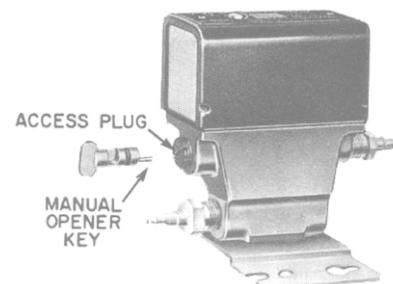


Fig. 1 -- Series V11 Three-Way Solenoid Valve with optional manual opener key.

### Specifications

<b>Product Number</b>	<b>V11HAA-100</b>	110/120 V, 50/60 Hz
	<b>V11HBA-100</b>	220/240 V, 50/60 Hz
	<b>V11HCA-100</b>	208 V, 50/60 Hz
	<b>V11HDA-100</b>	440/480 V, 50/60 Hz
	<b>V11HFA-100</b>	277 V, 50/60 Hz
	<b>V11HGA-100</b>	24 V, 50/60 Hz
	<b>V11PNA-105</b>	24 VDC
<b>Air Connections</b>	¼" Barb Connections in Common Port and Normally Closed Port. Normally Open Port is ⅜" FNPT	
<b>Ambient Temperatures</b>	<b>Alternating Current Models</b>	Minimum 32° F (0° C) Maximum 140° F (60° C)
	<b>Direct Current Models</b>	Minimum 32° F (0° C) Maximum 104° F (40° C)
<b>Conduit Opening</b>	⅝" Diameter	
<b>Finish</b>	<b>Valve Body</b>	Dull Gray (Iridate)
	<b>Cover and Case</b>	Gray Baked Enamel
<b>Material</b>	<b>Valve Body</b>	Die Cast Aluminum
	<b>Cover and Case</b>	Cold Rolled Steel
<b>Maximum Pressure Rating</b>	30 PSIG (207 kPa)	
<b>Operating Pressure (All Three Ports)</b>	0 to 20 PSIG (0 to 138 kPa)	
<b>Packaging</b>	Bulk Pack Normally Supplied to OEMs. Individual Pack Available at Extra Cost	
<b>Power Consumption</b>	<b>Alternating Current Models</b>	6 Watts
	<b>24 VDC Models</b>	9 Watts
	<b>115, 230 VDC Models</b>	8 Watts
<b>Pressure and Flow Ratings</b>	With a 15 PSIG (103 kPa) inlet and 0 PSIG (0 kPa) Outlet. The Valve Will Pass 1.5 cfm (2592 SCIM) (0.71 l/s) of Air From The Common To The Normally Closed Connection (When Energized) Or From The Common To The Normally Open Connection (When De-energized)	
<b>Shipping Weights</b>	<b>Bulk Pack—60 Units Per Carton</b>	55 lb (24.9 kg)
	<b>Individual Pack 56 Units Per Carton</b>	50 lb (22.7 kg)
<b>Wiring Connections</b>	18" Wire Leads	

All Series V11 air valves are designed for use *only* as operating devices. Where system closure, improper flow, or loss of pressure due to valve failure can result in personal injury and/or loss of property, it is recommended that additional devices be added to indicate proper system operation, (for example, blade position indication on the damper blades in smoke damper applications).

### Features

- Positive air seal.
- Some models may be manually operated for testing and checkout.
- Compact and lightweight.
- Can be mounted in any position.

### General Description

The solenoid air valve is furnished for two-position action and has three identified connections: a normally open (N.O.) port with 1/8 in. FNPT connection, a normally closed (N.C.) port and a common (COM) port with 1/4 in. barbed fittings.

The ports in the die cast aluminum valve body have No. 60 mesh (217 micron openings) monel screens to avoid allowing foreign material from entering the valve ports to give positive air seal.

In a typical application, supply air is connected to the normally closed port and the control device is connected to the common port. When the solenoid is energized, a magnetic field activates a plunger-type valve stem and supply air is directed to the control device. When the solenoid is de-energized, the supply air connection is closed and the normally open port exhausts air from the control device. Reverse action may be obtained by connecting the supply air to the normally open port, using the normally closed port for exhaust. (See Fig. 2.)

### Manual Operation

The V11 may be manually operated independently of the electrical circuit. This makes it possible to actuate the pneumatic circuit for testing or checkout without closing the electrical circuit. To manually operate, remove the access plug and insert the key shown in Fig. 1. The manual opener key is not supplied as standard. Part No. Y99AA-4 key may be supplied separately at additional cost, when specified.

### Repairs and Replacement

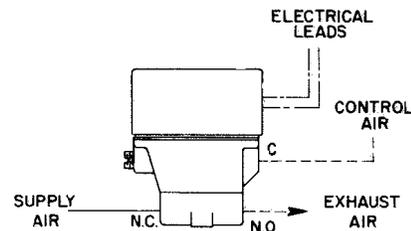
Field repairs must not be made except for coil replacement. The replacement coil is supplied with a cover and nameplate. For a replacement air valve or replacement coil, contact the nearest Johnson Controls wholesaler.

### Ordering Information

To order, specify:

1. Complete Product Number.
2. If complete Product Number is not available, specify Type Number, voltage and other specifications not standard.
3. Manual opener key Part Number Y99AA-4, if required.

#### Two-Pipe



#### Three-Pipe

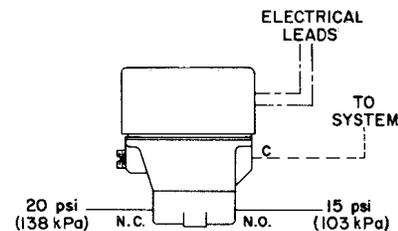
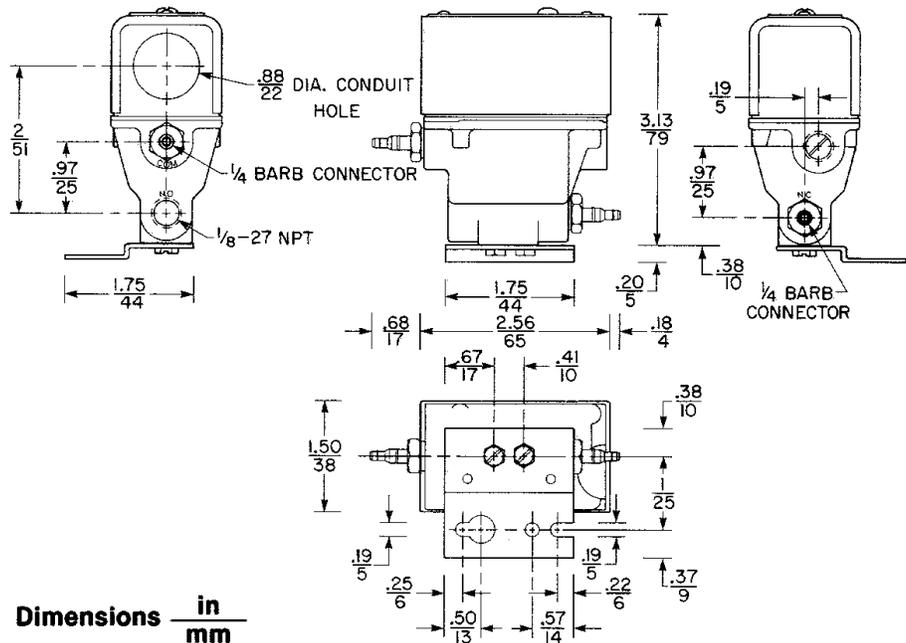


Fig. 2 — Typical application diagrams.



Dimensions  $\frac{\text{in}}{\text{mm}}$

Performance specifications appearing herein are nominal and are subject to accepted manufacturing tolerances and application variables.

UL Guide No. Y10Z  
File MH5939 (Except V11PNA-105 Model)



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